ASX Announcement

This announcement has been authorised to be lodged with the ASX by the Board of Directors of PNX Metals Limited.



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New Glencoe Mineral Resource expands Fountain Head Development

- Glencoe acquisition significantly increases the global Mineral Resource of the Fountain Head Gold Project where the Company is targeting first production in 2022
- Added benefit to the Hayes Creek zinc-gold-silver Project with increased tailings and water management flexibility potentially enhancing overall economics
- PNX's Mineral Resource Estimate completed for the Glencoe Gold Deposit (reported in accordance with the JORC Code, 2012) returns:
 - o 2.1 Mt @ 1.2 g/t Au for 79,000 oz Au (Inferred Category)
- Glencoe is located on a granted Mining Lease 3 kilometres north of PNX's 100% owned Fountain Head Gold Project
- The Glencoe Mineral Resource, which remains open in all directions, extends from surface to 120 metres vertical depth and comprises discrete lodes over a strike length of approximately 1.5 km
- Drilling to commence at the end of the current NT wet season to test for immediate extensions where surface gold anomalism highlights along-strike potential
- Fountain Head Environmental Impact Statement submission and Feasibility Study due in May

PNX Metals Limited (**ASX: PNX**) ("**PNX**", "the **Company**") is pleased to announce its first Mineral Resource Estimate ("**MRE**") for the Glencoe Gold Deposit ("**Glencoe**") (reported in accordance with the JORC Code, 2012) which is located 3 kilometres north of PNX's 100% owned Fountain Head Gold Project ("**Fountain Head**") in the Pine Creek region of the Northern Territory.

Managing Director's Comment

PNX Managing Director James Fox said: "The new Mineral Resource at Glencoe is a key component of PNX's NT gold development strategy, and along with the Fountain Head gold and Hayes Creek gold/silver oxide mineral resources enhances the proposed Fountain Head development and the goal of first gold production in mid-2022.

Important to note is that Glencoe remains open in all directions and drilling is planned to test potential alongstrike extensions to the deposit at the end of the current wet season (in the June 2021 Quarter).

The Company is finalising its Environmental Impact Statement and Fountain Head gold and Hayes Creek zincgold-silver Project Feasibility with both due for completion during May 2021."



Development Opportunity

The Glencoe acquisition represents a 'bolt on' asset that will significantly expand the proposed Fountain Head development as gold resources between Fountain Head and Glencoe now total 235,000 oz (Fountain Head hosts a Mineral Resource Estimate of 2.94Mt at 1.7g/t Au for 156,000 oz Au - refer Table 2 below, and PNX ASX announcement 16 June 2020 for full details including JORC tables).

The Company is finalising its assessment of low-risk and scalable processing infrastructure to rapidly monetise and generate early cashflow from gold resources at Fountain Head, Glencoe and the Mt Bonnie gold/silver oxides (part of Hayes Creek). This strategy may also provide an opportunity to enhance the economics of the overall Hayes Creek zinc-gold-silver Project by extending the project mine life with a future mined-out Fountain Head pit available to store tailings from sulphide flotation of ore.

Having recently received approval for its Mine Management Plan to dewater the Fountain Head pit, the Company is working with its consultants to submit the Project Environmental Impact Statement in May this year. Both of these documents are critical path items for the Project. Como Engineers have also been engaged to provide guidance and input into the process plant design with the Project feasibility also due for completion in May.

Under the Sale and Purchase Agreement (SPA) (executed 27 April 2021) with private company, Ausgold Trading Pty Ltd, PNX has acquired Glencoe for a total consideration of \$1.875 million; of which \$1.175 million has been paid to date with the balance due by 31 December 2021 (refer to Key Terms in PNX ASX announcement 10 December 2020 for further information). The Company has also received unconditional approval from the Foreign Investment Review Board for the acquisition.

Next Steps

Follow-up drilling along strike from Glencoe to test for potential extensions to the deposit is scheduled to commence at the end of the current NT wet season (in the June 2021 Quarter) with a drilling contract in place and Government approvals underway.

Glencoe Mineral Resource Overview

Independent mining consultants H&S Consultants Pty Ltd ("HSC"), estimated the Mineral Resource, summarised in Table 1, in accordance with the 2012 JORC Code¹. A summary report prepared by HSC forms part of this ASX announcement (Appendix A including JORC Table 1).

Table 1: Glencoe Mineral Resources by oxidation zone as at 26 April 2021 estimated using a cut-off grade of 0.7 g/t Au which is consistent with the assumed open-cut mining method. The cut-off grade is also consistent with the Mineral Resource Estimate for Fountain Head.

Glencoe Mineral Resource Estimate

JORC Classification	Oxidation	Tonnage (Mt)	Au (g/t)	Ounces (Koz)
	Oxide	0.5	1.3	20
Inferred	Transitional	0.3	1.2	11
	Fresh	1.3	1.1	48
Total		2.1	1.2	79

* Due to the effects of rounding the totals may not represent the sum of all components

¹ Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).



Previous Mining

Small-scale mining as part of a bulk sampling program was undertaken at Glencoe in two phases:

- 1. By Magnum Gold between 1989 and 1990 when 4 small pits were mined to a depth of approximately 10 m. This mined material was trucked to the historic Mt Bonnie mill for processing. Unfortunately, the records documenting this processing were lost in a fire at Mt Bonnie at that time.
- 2. The second phase of mining was by Territory Gold in 1994 as part of a joint venture with Magnum Gold where the West Pit was deepened to a depth of 15-17 m.

Geological Interpretation

The Glencoe gold mineralisation is hosted by greywacke, sandstone, siltstone and mudstone of the Paleoproterozoic Mount Bonnie Formation, and is contained within complex quartz veins and shears spatially associated with the axial regions of shallow plunging anticlines. The majority of the gold-bearing quartz veins occur within sub-vertical to steeply dipping fracture and shear zones. Other gold-bearing quartz veins are interpreted to have conformable or 'saddle reef' geometries, and occur as stratabound bodies extending outwards from the discordant fracture-filled zones.

Late-stage chlorite alteration, shearing and brecciation overprint the gold-bearing veins, including country rock breccias with a chlorite matrix. There is a strong association of gold with sulphides, predominantly pyrite and arsenopyrite, and a close association between chlorite alteration and sulphide/gold/quartz vein development. Mineralisation has typically favoured the more ductile carbonaceous mudstone horizons. There appears to have been some gold redistribution by near-surface supergene processes.

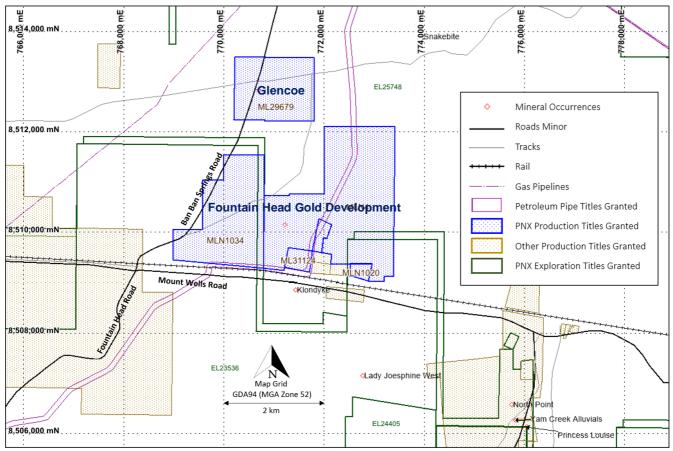


Figure 1: Location map of the Glencoe and Fountain Head Gold Development



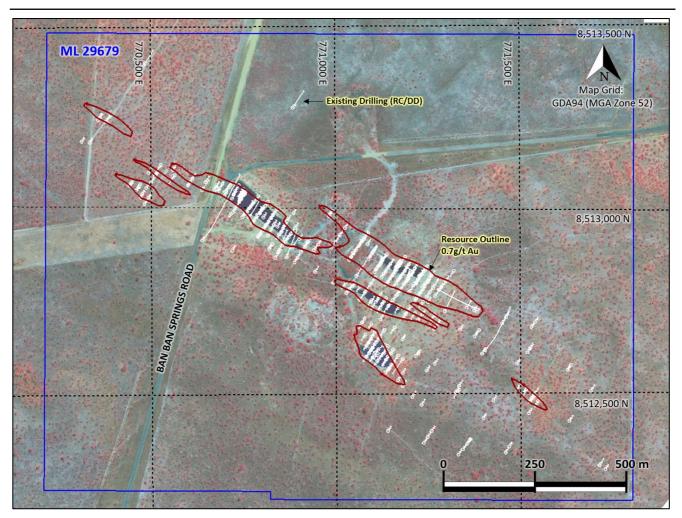


Figure 2: Glencoe Project Minerals Licence (ML 29679) boundary, existing RC and Diamond drill hole collars and traces, and resource outline at 0.7g/t Au cut off. Background image is a GeoEye satellite image in Near Infra-Red.

Drilling, Sampling and Assaying Techniques

A total of 310 reverse circulation (RC) holes and 59 diamond drillholes (DD) holes were drilled between 1985 and 1987 by Magnum Resources at the Glencoe deposit. This was followed up between 2007 and 2008 by Australasia Gold Ltd who drilled 12 RC holes and 8 DD holes. Some of these holes were drilled outside the area covered by the resource estimate. The current resource estimate for Glencoe is based on 308 RC drill holes totalling 12,219.6 m and 59 DD holes totalling 3,707.1 m. The project area also contains shallow Rotary Air Blast (RAB) drilling, grade control drilling, auger and costean sampling. Data from these holes were not used to estimate the resource, but have served as a useful guide to map the extent of known mineralisation and assisted in highlighting areas for follow-up testing.

Magnum Resources: RC holes were sampled at 1 m intervals with the cuttings riffle split into a 2 - 4 kg samples for standard sample preparation (drying, crushing and pulverising) and analysis by fire assay. This RC drilling was conducted using a cross-over sub-assembly rather than a face sampling hammer which is typically used today. Diamond drilling was carried out using HQ core size and triple tube core barrels to maximize recovery. Diamond core was sampled on the basis of logging after diamond-sawing of the core. One half of the core was submitted for assay, the other retained in core boxes at site. Sample intervals varied widely from 10 cm to 6.9 m, based on logged lithological boundaries, with split half core samples submitted for standard sample preparation and analysis by fire assay by North Australian Laboratories (NAL) Pine Creek using a 50 g charge.

Australasia Gold: RC holes and RC pre-collars were sampled at 1 m intervals. Diamond drilling was carried out using HQ/HQ3 core sizes. It is assumed that the core was sawn in half for assaying though



this was not recorded. Core samples were dispatched to ALS Chemex, Adelaide, for sample preparation and then forwarded to their Perth facility for analysis. Samples were dried with the entire sample pulverized followed by multiple element analysis (ME-ICP43), and gold analysis either by Aqua Regia extraction (Au-OG43) or Fire Assay extraction (Au-AA25) using a 30 g charge.

Historic metallurgical studies indicate the presence of coarse gold, which can cause problems with the representivity and repeatability of assaying. It is assumed that the sample size is appropriate for the grain size of the material being sampled but this has not been verified through test work.

Quality Assurance and Quality Control

No field duplicates or other independent QAQC samples were submitted for analysis by either Magnum Resources or Australasia Gold. Internal laboratory QAQC for the Magnum Resources sampling was limited to laboratory repeats. The internal laboratory QAQC Australasia Gold samples included standards, blanks and laboratory duplicates. The laboratory duplicates were conducted on every 20th sample although it is uncertain if these were crush or pulp duplicates. Analysis by PNX indicates that there was good correlation in duplicate grades, negligible contamination in blanks, and 92% of standards were within the target limits.

Estimation Methodology

The gold concentration was estimated by recoverable Multiple Indicator Kriging (MIK) using the GS3 geostatistical software and validated in the Micromine mining software. MIK was considered by HSC as the most appropriate estimation method to estimate gold distribution at Glencoe as it specifically accounts for the changing spatial continuity at different grades through a set of indicator variograms at a range of grade thresholds. The reported resources have been estimated on the assumption that the deposit will be mined by open-pit and the block models were created using block dimensions of $20 \times 10 \times 10$ m (E, N, RL respectively). Further information on estimation parameters and search criteria can be found in the Mineral Resource Estimation report, Appendix A.

Mineral Resource Classification

Despite the close spaced drilling and proven grade continuity, the entire MRE is classified as Inferred due to the points below:

- Limited historical density test work covering all oxidation zones. PNX completed 64 density samples on historic core (including 4 oxide, 11 transitional and 49 fresh rock samples) which was used to inform the model
- Limited historic QAQC test work to modern day standards on the assay samples
- Geological logging highlights a number of holes with low drill recovery and wet RC samples
- Historic reports point to the potential for downhole contamination due to the use of a cross-over subassembly with the RC holes

PNX elected not to include the eastern end of Domain 5 (to the east of Local Grid 4240 mE) in the reported MRE due to the wide spacing of the historic drilling (Figure 3 red ellipse). Additional drilling is necessary to estimate any gold resources in this area and is part of PNX's upcoming drill program.

Relevant factors are considered to have been accounted for and the classification appropriately reflects the Competent Person's view of the deposit.

Cut Off Grade

The MRE at Glencoe is reported at a cut-off grade of 0.7 g/t gold as shown in Table 1. This cut-off grade was selected by PNX because 0.7 g/t gold is the cut-off grade for the Mineral Resource at PNX's nearby Fountain Head deposit where mineralisation is very similar. At a cut-off grade of 0.7 g/t, gold mineralisation defines seven discrete lodes (steeply dipping tabular bodies between 10 and 70 m thick (Figure 3) with a total strike length of approximately 1.5 km (grid east-west) and a plan width of 320 m. The upper limit of the mineralisation is land surface and the reported resources are limited to a maximum vertical depth of 120 m below. The blocks that



comprise the model are sized by the proportion over 0.7 g/t and coloured by the grade of the portion of the block that is over 0.7 g/t (Figures 3 and 4).

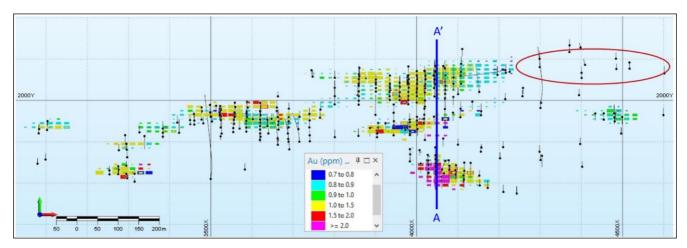


Figure 3: Plan view showing block model at a 0.7 g/t Au cut-off. Legend refers to resource blocks. An area of potential extension is shown by the red ellipse. Source: HSC MRE, Figure 6.

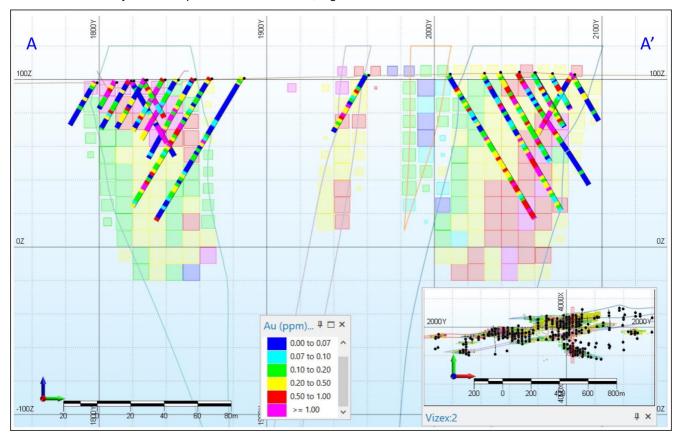


Figure 4: N-S cross section (4045m E) of gold drill data and estimated block grades. Legend refers to drill hole values; Resource block values from Figure 3 (Refer Figure 3 for location shown as a blue line A-A'). Source: HSC MRE, Figure 7.

Metallurgy

The Glencoe deposit has been previously mined and processed. The metallurgical method expected to be used to economically recover the gold at Glencoe and at PNX's Fountain Head Project is Carbon-In-Leach Cyanidation (CIL). Historic test work at Glencoe supports this assumption with further work analysis expected to be performed.



Modifying Factors

No modifying factors were applied to the Mineral Resource Estimate. Mining dilution, ore loss and metallurgical recoveries, capital and operating cost estimates, royalties and metal prices/FX rates will be considered as the Project is evaluated for mining.

For additional material information summary information including JORC Table 1 sections 1-3 see attached memorandum by HSC.

Competent Persons Statement

The information in this report that relates to exploration data and cut off grades is based on information compiled by Mr Marco Scardigno. Mr Scardigno is a full-time employee of PNX Metals Ltd. Mr Scardigno is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Scardigno consents to the inclusion of this information in the form and context in which it occurs.

The information in this report that relates to Mineral Resources is based on information compiled by Mr Rupert Osborn. Mr Osborn is a fulltime employee of H&SC, Mr Osborn is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Osborn consents to the inclusion of this information in the form and context in which it occurs.

For further information please visit the Company's website <u>www.pnxmetals.com.au</u> or contact us:

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Mineral Resource Statement Overview

Pursuant to ASX listing rule 5.8.1, and in addition to the information contained in the JORC tables (refer PNX ASX announcement 16 June 2020 for full details including JORC tables), the Company provides the following in respect to the Fountain Head Mineral Resource.

Fountain Head Resource Estimate

Independent mining consultants CSA Global Pty Ltd ("CSA Global") estimated the Fountain Head Mineral Resource in accordance with the JORC Code, which is summarised below in Table 2.

Table 2: Fountain Head and Tally Ho Mineral Resources by JORC Classification as at 16 June 2020 estimated utilising a cut-off grade of >0.7 g/t Au which is consistent with the assumed open cut mining method.

JORC Classification	Tonnage (Mt)	Au (g/t)	Ounces (Koz)		
Tally Ho					
Indicated	0.94	2.0	59		
Inferred	-	-	-		
Total	0.94	2.0	59		
Fountain Head					
Indicated	0.89	1.4	41		
Inferred	1.11	1.6	56		
Total	2.00	1.5	96		
	Total Fountain	Head + Tally Ho*			
Indicated	1.83	1.7	100		
Inferred	1.11	1.6	56		
Total	2.94	1.7	156		

* Due to the effects of rounding, the total may not represent the sum of all components

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements referenced in this announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.



Appendix A

Mineral Resource Estimation prepared by H & S Consultants Pty Ltd including JORC Table 1



RESOURCE ESTIMATION | FEASIBILITY STUDIES | DUE DILIGENCE

RESOURCE SPECIALISTS TO THE MINERALS INDUSTRY

Resource Estimation of the Glencoe Gold Deposit, Northern Territory

Prepared for PNX Metals

by H&S Consultants Pty Ltd

> Author: Rupert Osborn Reviewer: Simon Tear

26 April 2021

The contents of this report are CONFIDENTIAL and PROPRIETARY. The report may not be released to any third party without the written consent of both H&S Consultants and PNX Metals

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1 Introduction

PNX Metals (PNX) commissioned H&S Consultants Pty Ltd (H&SC) to conduct a Mineral Resource Estimate (MRE) for the Glencoe gold deposit, which forms part of the Pine Creek Gold Province in the Northern Territory, and is located 120 km South East of Darwin. The approximate location of the Glencoe deposit is shown in Figure 1.

The Glencoe deposit was previously estimated in 2006 by Resource Evaluations Pty Ltd (ResEval) when it was owned by Australasia Gold Ltd. Additional drilling was carried out by Australasia Gold in 2007.

This document is intended to be a technical report presenting the recent MRE in accordance with the 2012 JORC Code & Guidelines.

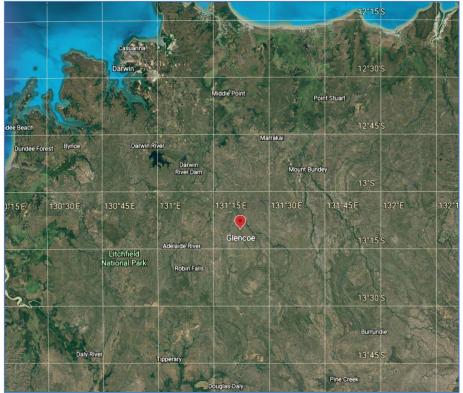


Figure 1: Map showing approximate location of the Glencoe deposit

H&SC has agreed to take responsibility for the Mineral Resource Estimate and resource classification. Marco Scardigno, a full time employee of PNX, has agreed to take responsibility for all other aspects of the resource estimate such as mineral rights, data quality and cut-off grade used for reporting. The H&SC work was conducted by Rupert Osborn, a full-time employee of H&SC. Mr Osborn is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person in terms of the JORC reporting code.

Marco Scardigno is a Member of the Australian Institute of Geoscientists and has sufficient experience to qualify as a Competent Person in terms of the JORC reporting code. Marco Scardigno has reviewed this report and agrees to the inclusion of the information in the form and context in which it appears.



2 Mineral tenement and land tenure status

The Glencoe Project is situated within a single, granted Mineral Lease ML29679, which at the time of writing this report (April 2021), is 100% owned by Ark Mines Ltd.

ML29679 is situated within a single, granted Exploration License EL25748, which is owned 90% by PNX Metals and 10% by Kirkland Lake Gold Australia Pty Ltd.

The Glencoe Project area is situated within the pastoral lease of Ban Ban Station, parcel number 695. PNX has existing arrangements with the pastoral lease holders, which governs land access and other obligations for each party and will include Glencoe in this arrangement.

An Indigenous Land Use Agreement (ILUA) surrounds and follows the main access road, Ban Ban Springs Rd, situated in the western end of the resource and partially covering the resource. It is unclear at this stage what actions if any are needed.

3 Sampling techniques and data

3.1 Drilling, sampling and assay techniques

Between 1985 and 1987 Magnum Resources drilled a total of 310 reverse circulation (RC) holes and 59 diamond drillholes (DD) holes in the Glencoe deposit and the area surrounding the deposit. This drilling was followed up by Australasia Gold Ltd between 2007 and 2008 who drilled 12 RC holes and 8 DD holes. Some of the holes are outside the area covered by the resource estimate. The current resource estimate for Glencoe is based on 308 RC drill holes totalling 12,219.6 m and 59 DD holes totalling 3,707.1 m. The area is also covered by shallow Rotary Air Blast (RAB) drilling, grade control drilling, auger and costean sampling although these data were not used for the resource estimate.

For the 1985 and 1987 Magnum Resources drilling the RC holes were sampled at 1 m intervals, and cuttings riffle split to a manageable 2 - 4 kg sample for standard sample prep of drying, crushing and pulverising for subsequent analysis by fire assay. This RC drilling was conducted using a cross-over sub-assembly rather than a face sampling hammer. Diamond drilling was carried out using HQ core size and triple tube core barrels to maximize recovery. Diamond core was sampled on the basis of logging after diamond-sawing of the core. One half of the core was submitted for assay, the other retained in core boxes at site. Sample intervals varied widely ranging from 10 cm to 6.9 m, based on logged lithological boundaries, with split half core samples submitted for standard sample preparation and analysis by fire assay by AAL Pine Creek using a 50 g charge.

For the 2007 to 2008 Australasia Gold drilling the RC holes, and RC precollars were sampled at 1m intervals. Diamond drilling was carried out using HQ/HQ3 core sizes. It is assumed that the core was sawn in half for assaying although this has not been confirmed. RC and core samples were dispatched to ALS Chemex, Adelaide, for sample preparation and then forwarded to their Perth facility for analysis. Samples were dried with the entire sample pulverized followed by multiple element analysis (ME-ICP43), and gold analysis either by Aqua Regia extraction (Au-OG43) or Fire Assay extraction (Au-AA25) using a 30 g charge. The aliquot size for Aqua Regia analyses is not known.

Gold analysis by fire assaying is considered to be a total assaying technique and the Aqua Regia assay technique is considered to be partial.

It is not known what quality control procedures were adopted for all sub-sampling stages to maximise representivity of the samples, beyond the processes described above.



It is not known what measures were taken to ensure that the sampling is representative of the in situ material collected. No field duplicate or second-half sampling appears to have been conducted for any of the drilling campaigns. A total of five twin hole pairs exist, with four of these pairs representing an RC hole twinned with a diamond core hole.

Preliminary historic metallurgical studies indicate the presence of coarse gold, which can cause problems with the representivity and repeatability of assaying. It is assumed that the sample size is appropriate for the grain size of the material being sampled but this has not been verified through test work.

Sample security measures for the drilling programs are not known.

No audits or reviews of sampling techniques and data have been carried out.

3.1.1 Drill sample recovery

For the Magnum Resources drilling the sample recovery was noted in geological logs for the 310 RC holes as 'Poor Recovery' wherever encountered (also sample quality was also noted in various terms such as 'Wet sample' and 'Contaminated'). Initial RC holes were largely confined to the interval above the water table (about 30 m) due to the difficulty in obtaining reliable sample below this interval. Improvement in technology later permitted reliable sampling to down-hole depths in excess of 100 m.

The Magnum Resources diamond core recoveries are believed to be moderate to poor in the oxidized zone (above about 30 m), but were nominally 100% below this. Highest core losses were generally recorded in areas of mineralisation which are characterized by fracturing. Where necessary, the use of adjacent RC and diamond holes was employed to minimize this problem.

The logged data containing the sample recovery information has been briefly examined by PNX and 'poor recovery' samples were found to form an insignificant (<2%) part of the dataset. Poor Recovery samples were found to generally overstate grades. No other relationship between grade and recovery, nor bias due to preferential material loss/gain has yet been identified.

Sample recoveries for the Australasia Gold drilling does not appear to be included in the compiled geology logs. This will need to be further checked.

It is unknown whether any other measures were taken to maximise sample recovery and ensure representative nature of the samples.

3.1.2 Logging

Drill logs capturing lithological data are available for all drilling and are at a suitable level of detail to support Mineral Resource Estimation, mining studies and metallurgical studies. The lithological logging includes qualitative attributes such as rock type, weathering, alteration and vein types as well as semi-qualitative attributes such as percentage of vein material.

Core photographs for the Magnum Resources drilling do not exist or are unable to be located. All Australasia Gold diamond core was reportedly photographed although H&SC has not viewed these.

All drilled lengths have been geologically logged, except hole GCRC092, and in sporadic cases where no sample was returned. For the drilling used in the resource estimate geological logs covering 15,846.34 m (99.5%) exist from 366 drill holes.

3.1.3 Quality assurance & quality control

It would appear that no independent QAQC samples were submitted for analysis by either Magnum Resources or Australasia Gold.



Internal laboratory QAQC for the Magnum Resources sampling appears to have been limited to laboratory repeats.

The internal laboratory QAQC Australasia Gold samples included standards, blanks and laboratory duplicates. The laboratory duplicates appear to have been conducted on every 20th sample although it is uncertain if these are crush or pulp duplicates. Data analysis by PNX Metals indicates that there was good correlation in duplicate grades, negligible contamination in blanks, and standards were mostly within the target limits.

Ark Mines conducted de-surveying and validation of historic drill hole data in 2016-2017, and used this for cross-validation of the 2006 resource and wireframe model.

A total of five twin hole pairs exist, with four of these pairs representing an RC hole twinned with a diamond core hole. Analysis of the twinned holes by PNX Metals and Australasia Gold indicate that there may be issues with the RC sampling in the form of serious down-hole contamination, especially in the oxidised zone above the water table. The Magnum Resources drilling was conducted using a cross-over sub-assembly rather than the more modern face sampling hammer. The cross-over sub-assembly is rarely used nowadays due the potential for smearing grade downhole. Australasia Gold reports also mention that the first phase of Magnum Resources RC drilling (GCRC001 to GCRC185) may have been conducted using insufficient compressor capacity, which can result in an inability to flush all drill cuttings from the sub-assembly and drill stem.

No adjustments to assay data were made apart from the treatment of assays below detection limit, which is discussed in Section 6.1.

3.1.4 Location of data points

The major areas of mineralisation at the Glencoe deposit have been drilled on fences spaced nominally 20 m along strike and 10 m across strike. Two fences of 11 RC holes at 2.5m centres were drilled for a more detailed understanding of short range grade continuity. Down hole sample spacing is nominally 1 m.

Drill hole collar locations were originally located by tape and compass. These locations were later verified by Crocodile Gold as being accurately measured. The accuracy and quality of these surveys are not known but it is assumed that the collar locations were located with an accuracy of less than one metre.

A large majority of holes ('GCRC' series RC) do not have downhole surveys so planned dips and azimuths have been assumed. Downhole surveys were conducted for the majority of the Magnum Resources diamond drilling and all of the Australasia Gold drilling although the instrumentation used and accuracy of these surveys is not known.

All data locations employ the Glencoe Local Grid system, in which Grid North is approximately 34 degrees East of True North. It was originally surveyed by Geo-Spectrum in 1987 and re-established by Ausurv Pty Ltd for Australasia Gold in 2007. Transformation parameters to convert from Local Grid to GDA94 are shown below.

- Local to GDA94 (origin point 1001)
- Rotation: -34 28' 37"
- Scale: 1.000505997
- Shift East: 768425.534
- Shift North: 8510174.325



The topographic surface ('GL_topo') was created by PNX staff by downloading the topographic map sheets from NT Atlas (ntlis.nt.gov.au) at 1:2500 scale and then digitizing the elevation levels based on the levels shown on the maps. Accuracy is stated on the original topographic map sheets as being via digital photogrammetric methods without field verification, with 90% of elevations correct to within ½ the contour interval (contour interval =1m), expected horizontal accuracy is within 0.5m at source map scale. Just north of the pits there was no ground information so the surface was manually extended horizontally. This was then transformed to the Glencoe Local Grid and then merged with the pit surfaces provided in the existing datasets. The wireframe was modified by H&SC to remove the stockpiles where they overlay estimated mineralisation.

Detailed hydrographic surveys of the mined pits (they are filled with water, at present) have not yet been performed – the depths of the pits in this topographic surface were said to have been roughly based on depths of the blast holes and are not expected to have good accuracy.

The data spacing and distribution is more than sufficient to establish the geological and grade continuity of the Inferred Resources reported here. Higher levels of classification would be possible if the reliability of the sampling and assaying procedures were greater.

For the purposes of resource estimation intervals were composited to one metre samples in order to provide equal support for estimation. No field compositing of sub-samples was completed as it was not necessary.

3.2 Exploration done by other parties

Exploration and related activities at the Glencoe Project can be broadly categorized into the phases listed below. This MRE uses RC and DD data from the 1985-1987 and 2007-2008 drilling programs only.

Magnum Resources Ltd/Magnum Gold NL

- 1985-1987 Discovery, RAB, Auger, RC and DD Drilling Programs
- 1988 Metallurgical Testwork
- 1989-1990 1st Trial Mining
- 1995 2nd Trial Mining (aborted early material stockpiled)

Australasia Gold

- 2006 Optimisation and Scoping Study
- 2007 Survey of the Glencoe Local Grid, IP/Resistivity Survey
- 2007-2008 Drilling Programs
- 2011 Heliborne VTEM Survey

Newmarket Gold NT

- 2012 Processing Stockpiled Material
- 2016 Environmental and Metallurgical Testwork

3.3 Other substantive exploration data

Grade control drilling and blast hole data collected at the time that the four trial pits were excavated were not used for the resource estimate due to uncertainty regarding hole position accuracy. H&SC has not assessed this data as it was beyond the scope of work.

Costeans, auger holes and shallow RAB holes were conducted by Magnum Resources from 1985 to 1986.



Metallurgical test results: a) Amdel Ltd testwork for Australasia Gold, 2010, includes comminution, flotation, gravity separation and leaching tests, and b) ALS Metallurgy testwork for Ark Mining, 2012, includes gravity separation/cyanidation time leach testwork.

Information on geotechnical characteristics, geophysical surveys, or potentially deleterious substances are either unavailable or have not yet been thoroughly searched.

Although limited information on the amount of the trial mining is available, the details such as the method of treatment and the metallurgical recoveries are either unavailable or have not yet been thoroughly searched.

3.4 Database integrity

It is not known what measures were taken to ensure that the data has not been corrupted between its initial collection and its use for Mineral Resource estimation purposes.

The drill hole database was provided to H&SC in the form of four comma delimited files. H&SC did not modify these tables and any adjustments, such as compositing, were carried out programmatically so a transcript of any changes was recorded and checked.

Basic drill hole database validation completed by H&SC include:

- Intervals sampled for gold were assessed and checked for duplicate entries, sample overlaps, intervals beyond end of hole depths and unusual assay values
- Downhole geological logging was also checked for interval overlaps, intervals beyond end of hole depths and inconsistent data.
- The downhole survey data provided were checked for unrealistic deviations.

Assessment of the data indicates that it is suitable to form the basis of the Inferred MRE presented here.

3.5 Site visits

Marco Scardigno who acts as Resource Geologist for PNX Metals and takes responsibility for the data underpinning the Mineral Resource Estimate has not visited the Glencoe deposit due to wet conditions in the area during early 2021.

No site visit has been conducted by H&SC due to time and budget constraints and restrictions due to the COVID-19 pandemic.

4 Metallurgy

It is assumed that there are no major metallurgical issues. The Glencoe Project has been previously mined and processed. The metallurgical method expected to be used is the Carbon-In-Leach Cyanidation (CIL) method, which has been used in the gold industry since the 1980's. Test work at the Glencoe Project using the CIL method supports this assumption; further work is expected to be performed.

5 Geology

The following information was supplied by PNX.

The Glencoe mineralization is hosted by greywackes, sandstones, siltstones and mudstones of the Palaeoproterozoic Mount Bonnie Formation, and is contained within complex quartz veining and



shearing spatially associated with the axial regions of shallow plunging anticlines. Geological understanding of the deposit is wholly dependent on the original observations made during drilling out of the deposit, as drill core and other samples have not survived.

Notable features of the structural setting include:

- 1) The majority of the quartz vein mineralization occurs within sub vertical to steeply dipping fracture and shear zones, with previous workers also noting a possible association with more ductile carbonaceous mudstone in these zones. Veins range in width from millimetre scale up to several metres.
- 2) A second style of quartz veining is interpreted as having a conformable or 'saddle reef' geometry, and occurs as stratabound bodies extending outwards from the discordant fracture-filled zones. This style is also described as favouring carbonaceous mudstone horizons, as well carrying higher gold values.
- 3) Late-stage chlorite alteration, shearing and brecciation overprinting earlier veining is also a feature, including country rock breccias with a chlorite matrix. It was noted by previous workers that this alteration is associated with enhanced gold values in both veins and breccias

Important features of the chemical environment of gold occurrence include:

- A strong association of gold with sulphides, dominantly pyrite and arsenopyrite.
- The occurrence of other metals in only trace amounts, most notably Cu and Bi.
- There is a close association between chlorite alteration and sulphide/gold/quartz vein development.
- Oxidation of sulphides has occurred in the weathered zone, and been replaced by iron oxide phases such as goethite and limonite occurring as fracture coatings and box works. This is interpreted to have resulted in some gold re-distribution during an overprinting supergene event.

5.1.1 Orientation of data in relation to geological structure

The mineralisation is interpreted to be steeply dipping and strikes grid east-west. The vast majority of drilling is inclined towards grid north or grid south and is considered to achieve unbiased sampling. Several drill holes are considered to have been orientated parallel to the mineralisation although these were still included in the dataset used for resource estimation. The impact of these holes was assessed and considered to be acceptable. The relationship between drilling orientation and the orientation of the mineralisation is not considered to have introduced a sampling bias for the purposes of the Mineral Resource Estimate.

No exploration results are reported in this document. It is considered that all substantive material relevant to resource estimation at Glencoe has been reported.

5.1.2 Geological interpretation and wireframing

A geological model of the Glencoe deposit has not been produced.

The gold mineralisation at Glencoe is generally found associated with structurally controlled quartz veining within sub vertical to steeply dipping fracture and shear zones. H&SC produced a total of seven steeply dipping wireframe solids that represent volumes of gold mineralisation elevated above background grades. This resulted in a nominal 0.08 g/t grade threshold boundary. These zones, shown in Figure 2, are reasonably supported by drilling and form coherent, sub-parallel, nominally tabular bodies. The confidence in the mineralisation wireframes is considered to be moderate due to the close spaced drilling and nominally tabular nature of the mineralisation. Much of the drilling targets the



centre of the mineralised zones and greater confidence in the boundary locations would be possible with drilling that crossed the edges of the mineralised zones. Based on the drill hole spacing, higher levels of classification would be justified if the reliability of the drill hole data could be verified.

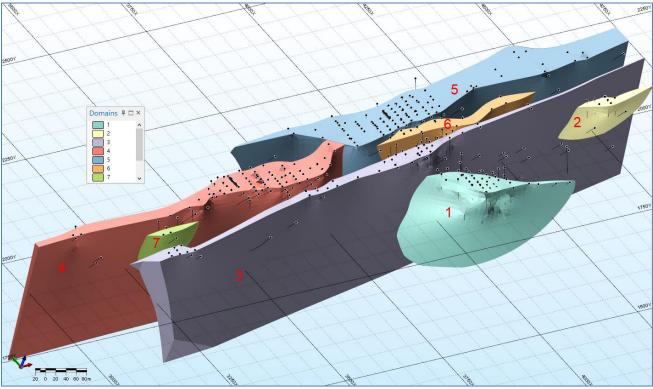


Figure 2: Oblique view showing drill hole locations and mineralisation wireframes

The domain boundaries were assessed visually and with the aid of boundary plots like that presented in Figure 3, which shows the gold grades by distance from the boundary wireframe for Zone 5. The numbers of composites are recorded across the top of the figure. Pseudo-stationarity is assumed to have been achieved.

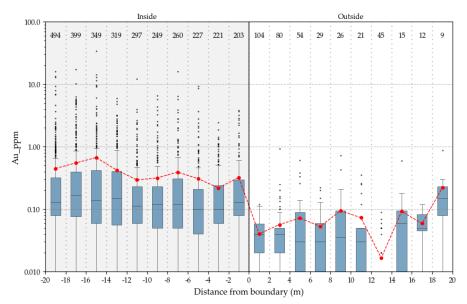


Figure 3: Boundary plot showing grades across the domain boundary of Zone 5

Drill hole data indicates that near surface mineralisation (to a depth of around eight metres) appears to spread out, covering a larger area than the steeply dipping zones. A flat-lying shallow wireframe



surface was created in order to define these areas. The confidence in the location and geological reason for this surface is considered to be reasonably low, however the impact on the global resource estimate is very limited.

PNX created wireframe surfaces representing the Base of Complete Oxidation (BOCO) and the Top of Fresh Rock (TOFR). These surfaces are based on drill hole logging although they do not always match the weathering data because a certain degree of smoothing was applied in order to create a continuous surface. Smoothing was particularly necessary where overlapping or close-spaced holes had very different values (possibly due to different geologist interpretations). These oxidation surfaces were used to define Oxide, Transitional and Fresh zones for the purpose of assigning dry bulk densities to the block model.

Small local variations in the interpretation of the continuity of individual domains are possible but are unlikely to significantly impact the global MRE as the interpretation of the domains is well supported by drill hole data and the domain boundary was set at a relatively low grade threshold.

No faults were modelled.

6 Data used for resource estimate

Drill hole data from the RC and DD by Magnum Resources and Australasia Gold was used in the MRE presented here. Data from the RAB drilling, auger and costean sampling was not used to estimate the gold grades as the quality of the data was assumed to be low and not fully representative of the gold mineralisation. Information from the RAB drilling was, however, used to help define and limit the base of the shallow, flat lying mineralisation in areas where RC and diamond drilling did not exist.

The results from two drill holes were excluded from the estimates. Data from GCRC285 was omitted as the collar location was exactly the same as GCRC284, resulting in co-located samples. Both these holes are 20 m long vertical RC holes that were drilled as part of a line of holes spaced 2.5 m apart.

Data from GLD008 was excluded at the request of PNX. GLD008 is a 330 m long diamond hole that was drilled below the mineralisation in Zone 4. Mineralisation was intercepted at a vertical depth of around 170 m below surface and it was uncertain how this mineralisation relates to the overlying mineralisation. The effect of this exclusion on the MRE is minimal due to the fact that the reported MRE is limited to a maximum depth of 120 m below surface.

6.1 Composites used for estimation

There was no record as to what negative gold values in the database represented. Small negative values (-0.010 and -0.008) were treated as being assayed at below detection limit and were assigned half the absolute value. It was unclear what large negative values (-9000, -7000, -5000, and -4000) represented and it appears that these values represent a mixture of unassayed intervals and assays below detection limit. Unassayed intervals appeared to be a combination of intervals that were selected to be unassayed due to a lack of visible mineralisation and intervals that were unassayed due to issues such as low sample recovery. It was decided that consecutive intervals totalling over 3 m were assigned a default 0.005 g/t as it was considered that it was likely that these intervals were selectively unassayed. The large negative values in intervals totalling 3 m or less were removed as it was considered likely that these intervals were not assayed due to lack of recovered sample.



Sample interval lengths vary from 10 cm to 6.9 m. The vast majority of assayed intervals have been sampled on 1 m intervals. Samples were therefore composited to 1 m intervals within each zone with a minimum composite length of 0.5 m.

The number and statistics of the composite samples used in the estimate can be seen in Table 1 and boxplots of the gold grades for each domain can be seen in Figure 4. No top-cutting of gold values was performed as it was considered unnecessary due to the use of Recoverable Multiple Indicator Kriging (MIK) for estimation.

Zone	Count	Metres	Minimum (ppm)	Maximum (ppm)	Mean (ppm)	Median (ppm)	STD	CV
1	1,665	1,663.8	0.005	54.50	0.69	0.09	3.30	4.8
2	224	224.0	0.005	5.35	0.35	0.10	0.79	2.3
3	1,252	1,251.5	0.005	58.00	0.61	0.16	2.51	4.1
4	3,568	3,563.7	0.005	41.55	0.54	0.16	1.70	3.2
5	5,359	5,355.3	0.004	33.90	0.43	0.14	1.21	2.8
6	451	451.0	0.005	4.85	0.17	0.07	0.34	2.0
7	153	153.0	0.005	6.74	0.43	0.12	0.93	2.2
Total	12,672	12,662.2	0.004	58.00	0.50	0.13	1.88	3.7

 Table 1: Gold composite sample statistics

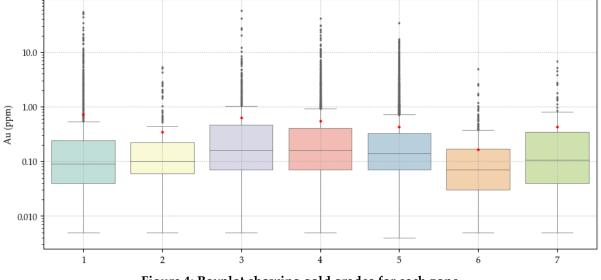


Figure 4: Boxplot showing gold grades for each zone

Only gold was estimated so no assumptions between other element variables were made. It is assumed that there will be no by-products. Deleterious elements such as sulphur or arsenic have not been estimated. The presence of arsenopyrite recorded in drill hole logs indicate that arsenic mineralisation is present which may have an impact on metallurgical processing or environmental management.

Variography was carried out on the one metre composited data using the H&SC in-house software program GS3. Gold indicator variograms were created for Domains 1, 4 & 5 but Domains 2, 3, 5 & 6 lacked sufficient data to produce good variogram models so variograms from the nearest domain were rotated and utilised. Variogram models were generally disc-like, showing longer continuity along strike and down dip than across strike.

6.2 Density Data

Historic density test work was carried out on 388 diamond core samples although the method of measurement is not known. More recently PNX conducted test work on 63 samples using an Archimedes technique. The vast majority of samples were from fresh rock. Drill core pieces between 10 and 30 cm were dried and weighed. The samples were then soaked in water in order to saturate the sample and weighed again. The samples were then weighed in water.

After assessing the density measurement results PNX Metals elected to use assumed values for the different oxidation zones. The blocks in the completely weathered portion of the deposit were assigned a density of 2.40 t/m³. The partially weathered zone was assigned a density of 2.50 t/m³ and the fresh zone was assigned a density of 2.70 t/m³. H&SC considers these values to be reasonable but higher quality density assessment is recommended in order to raise the classification of the Mineral Resource.

7 Resource estimation

The gold concentration was estimated by recoverable Multiple Indicator Kriging (MIK) using the GS3 geostatistical software and validated in the Micromine mining software. The MIK method was developed during the early 1980's with a particular view toward addressing some of the difficulties associated with estimation of resources in mineral deposits. Problems arise where sample grades show the properties of strong variation and consequently where estimates of grade show relatively extreme sensitivity to a small number of high grades. These characteristics are often found in complicated deposits where the coefficient of variation of grade exceeds three. MIK is one of a number of non-linear methods developed at that time, which can be used to provide better estimates than the more traditional methods of Ordinary kriging (OK) and inverse distance weighting.

There are three main scenarios in which MIK may be more applicable, namely:

- Skewed grade distributions
- Mixed grade populations, that are difficult or impossible to separate e.g. stockworks with high grade veins
- Deposits with wide spaced data where less smoothed estimates are desired

MIK is considered the most appropriate estimation method for the type of gold grade distribution at Glencoe because it specifically accounts for the changing spatial continuity at different grades through a set of indicator variograms at a range of grade thresholds. MIK can also help avoid having to use the practice of top cutting, which can be somewhat arbitrary in the resource estimation process.

7.1 Block model

All of the resources reported here have been estimated on the assumption that the deposit will be mined by open-pit and the block models were created accordingly. Block dimensions were 20x10x10 m (E, N, RL respectively). The plan dimensions were chosen as they match the nominal drill hole spacing (preferable for MIK estimation). The vertical dimension was chosen as a compromise between downhole data spacing, the orientation of the steeply dipping mineralisation with respect to the drilling and the planned bench height. Discretisation was set to 5x5x5 (E, N, RL respectively). The block model definition is provided in Table 2. Coordinates denote block centroid positions and are recorded in the Glencoe local grid.



Table 2:	Table 2: Block model definition					
Parameter	East	North	RL			
Minimum coordinate	2,990	1,685	-185			
Maximum coordinate	4,690	2,245	125			
Panel size (m)	20	10	10			
No. of panels	86	57	32			

7.2 Selective mining units

MIK estimation works best using blocks that are a similar size to the sample spacing. The resources in smaller Selective Mining Units (SMUs) can be reported by applying a block support adjustment based on the dispersion variance that occurs when changing from sample size support to the size of a mining block. The block support adjustment is completed separately for each panel because the conditional histogram of sample grades within each panel is different and consequently the actual variance adjustment may be different for each panel. In order to apply a block support adjustment, assumptions have to be made regarding the SMU size and the spacing of future grade control drilling. Smaller SMU sizes allow for more selective mining. PNX have informed H&SC that an SMU of 5x5x2.5m (E, N, RL respectively) can be assumed and that the grade control sample spacing pattern is likely to be the planned blast hole spacing of 3.5x3.5x4m (E, N, RL respectively). Less selectivity due to a larger SMU or more diffuse grade control drilling is likely to decrease the achievable gold mining grades. Internal dilution within the SMU unit is accounted for in the estimates.

7.3 Search criteria

The search criteria used for the MIK gold estimates are shown in Table 3 and consist of four search passes with progressively increasing search radii or decreasing data requirements. The search ellipsoids for each domain are rotated according to the local orientation of the mineralised domains. These rotations are the same as those applied to the variogram.

The maximum distance of extrapolation of reported resource estimates from data points is limited to 50 m and the maximum depth of reported estimates is set to 120 m below surface. These limits were applied following estimation.

Table 5. WIK Search Chteria					
Axis	Pass 1	Pass 2	Pass 3	Pass 4	
Axis 1	10 m	10 m	15 m	15 m	
Axis 2 (Strike)	25 m	50 m	75 m	75 m	
Axis 3 (Down dip)	25 m	50 m	75 m	75 m	
Composite Data Requirements					
Minimum data points (total)	28	28	28	14	
Max points (total)	64	64	64	64	
Octants Required	4	4	4	2	

Table	3:	MIK	Search	criteria
Iuvic	••		ocuren	criteria

Extrapolated estimates form around 30% of the global resource estimate and are limited to the edges and base of the deposit.

The search ellipses were aligned parallel to the interpreted orientation of the mineralisation for each zone. The surficial, flat-lying domains used flat-lying search ellipses.

7.4 Sensitivity analysis

For the MIK estimation used here a set of thresholds are selected to split the sample grade distribution into a total of 15 classes. A set of indicators is then created whereby, for each class, a 1 is assigned if the sample grade is greater than the class threshold and a zero is assigned if the value is lower than the threshold. The class probability (or proportion) for each block is then estimated using OK followed by an order relation correction. The average grade for each indicator class is then weighted by incremental class proportion to calculate the total block grade (e-type estimate).

There can be a reasonably large difference between the mean and median of the top indicator class in zones where the gold grades are highly positively skewed. The choice of using the mean or median can have a large impact on the global and local resource estimates. In order to assess the sensitivity of the estimates to this assumption H&SC conducted estimates using the mean and median top indicator class values. For the estimates presented in this report the mean value was used as this appeared to better match the production data. At a gold cut-off of 0.7 g/t the estimates using the median top class value resulted in 6% less tonnes, 7% lower gold grade for a total of 13% fewer ounces. This is considered to be a moderate difference. It is recommended that ongoing reconciliation monitoring is carried throughout mining to track this issue.

7.5 Classification

Despite the close spaced drilling and proven grade continuity, the entire MRE is classified as Inferred due to issues regarding the underlying data noted below.

- No comprehensive, reliable density test work covering all oxidation zones has been carried out and bulk density values are assumed
- Very little QAQC test work has been completed on the assay samples from the Glencoe deposit
- Lack of data regarding RC sample recoveries, and the data that does exist suggests that there may be problems with samples of low recovery and wet RC samples
- Historic reports point to possible serious issues including downhole contamination

After discussion with PNX the eastern end of Domain 5 (to the east of Grid 4240mE) was not included in the reported MRE due to the wide spaced drilling. It was considered that the continuity of gold grade was not supported sufficiently by drill hole data to classify this material as part of the Mineral Resource. Additional drilling is likely to be necessary in order to upgrade the estimates in this area to form part of the Resource. This area is clearly highlighted by the red ellipse in Figure 6.

Relevant factors are considered to have been accounted for and the classification appropriately reflects the Competent Person's view of the deposit.

7.6 Reported estimates

The Mineral Resources at Glencoe are reported at a gold cut-off of 0.7 g/t shown in Table 4. This cutoff grade was selected by PNX as it is considered that the deposit can be mined economically at this grade. The estimates at a range of cut-off grades can be seen in grade-tonnage curves shown in Figure 5.

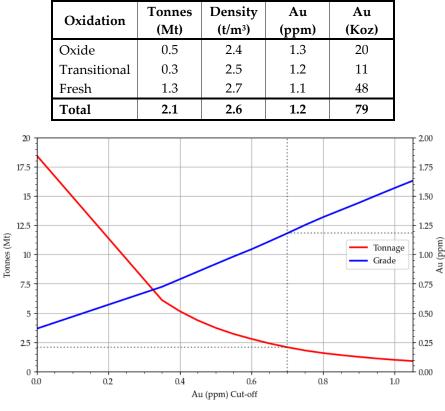
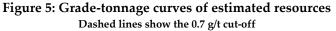


Table 4: Inferred Resources at 0.7 g/t gold cut-off by oxidation zone



At a cut-off of 0.7 g/t gold mineralisation exists in about seven discrete volumes with a strike length of around 1.5 km grid east-west and a plan width of 320 m. The upper limit of the mineralisation occurs at surface and the reported resources are limited to a maximum depth of 120 m below surface. The resources are composed of several steeply dipping tabular bodies between 10 and 70 m thick. The reported resources are shown in Figure 6. In this picture, the blocks are sized by the proportion over 0.7 g/t and coloured by the grade of the portion of the block that is over 0.7 g/t.

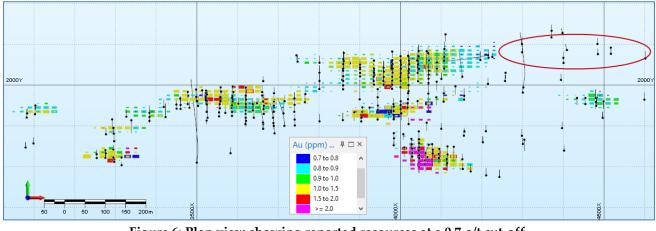


Figure 6: Plan view showing reported resources at a 0.7 g/t cut-off An an area of possible extension is shown by the red ellipse

7.7 Block model validation

The final H&SC block model was reviewed visually by H&SC and it was concluded that the block model fairly represents the grades observed in the drill holes. A cross-section is shown in Figure 7.



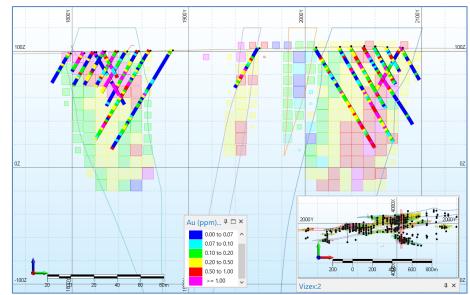


Figure 7: N-S cross section (4045 mE) of gold drill data and estimated block grades

H&SC also validated the block model statistically using histograms, boxplots, swath plots and summary statistics. Table 5 shows the composite and block model summary statistics, Figure 8 shows a histogram of the block and composite grades, Figure 9 shows boxplots of the block and composite grades for each domain and Figure 10 shows a swath plot for gold. The estimated mean grade for each zone is lower than the mean composite grade, however, the estimated median grades are higher than the composite median grades. This relationship is expected and is considered to be due to a combination of data clustering as well as smoothing due to the estimation process and the change from sample-sized data to block-sized estimates.

Zone	File	Count	Minimum	Maximum	Mean	Median	STD	CV
1	Composites	1,575	0.005	54.50	0.72	0.09	3.39	4.7
1	Estimated	619	0.008	4.19	0.36	0.20	0.48	1.3
2	Composites	224	0.005	5.35	0.35	0.10	0.79	2.3
2	Estimated	132	0.046	0.81	0.32	0.28	0.20	0.6
3	Composites	1,197	0.005	58.00	0.63	0.16	2.57	4.1
3	Estimated	842	0.005	2.23	0.39	0.31	0.30	0.8
4	Composites	3,484	0.005	41.55	0.54	0.16	1.71	3.2
4	Estimated	1,421	0.005	2.37	0.36	0.27	0.27	0.8
5	Composites	5,341	0.004	33.90	0.43	0.14	1.21	2.8
5	Estimated	2,456	0.005	2.29	0.36	0.30	0.25	0.7
C	Composites	438	0.005	4.85	0.17	0.07	0.35	2.1
6	Estimated	432	0.005	0.95	0.17	0.15	0.11	0.6
7	Composites	150	0.005	6.74	0.43	0.11	0.94	2.2
7	Estimated	139	0.005	1.62	0.42	0.23	0.37	0.9

Table 5: Composite and estimated summary statistics

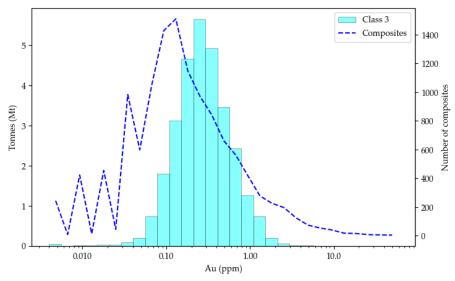
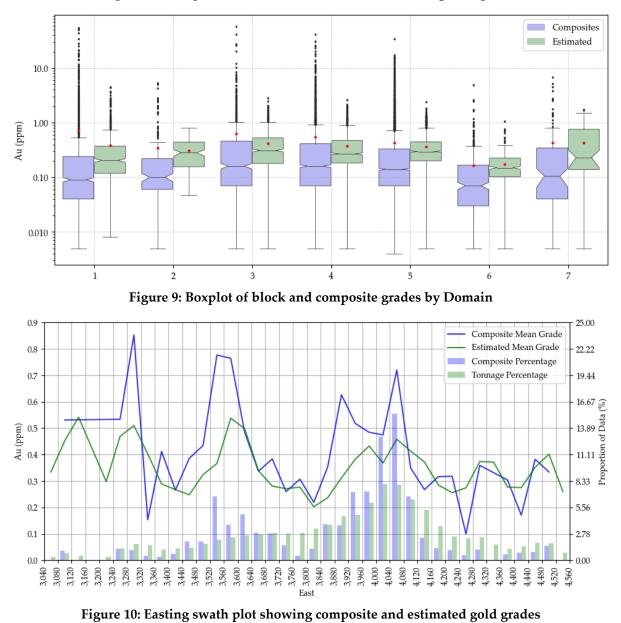


Figure 8: Histogram of mineralised zone block and composite grades



7.8 Reconciliation

Information regarding historical mine production has been taken from the 2006 ResEval report.

Limited mining as part of a bulk sampling program has been completed at Glencoe. This was completed in 2 phases, firstly by Magnum Gold between 1989 and 1990 when 4 pits were mined to a depth of 10m. This mined material was trucked to the Mount Bonnie mill for processing. The second phase of mining was by Territory Gold in a joint venture with Magnum Gold in 1994 when the West Pit was deepened to a depth of 15-17m. The ore mined in the second phase has not been processed and is currently stockpiled on site at Glencoe.

Full information regarding the bulk sampling program was not available to H&SC. The current topographic wireframe indicates that over 240 Kt of material was excavated. Mill records shown in Table 6 are stated to be incomplete and appear to lack information from deeper levels. The procedure for estimating the grade and tonnage of the stockpile material has not been assessed by H&SC. H&SC is also not aware of the cut-off grade used to differentiate ore and waste for the bulk sampling nor the SMU size used or the grade control sample spacing. The maximum reportable cut-off grade from the H&SC recoverable MIK estimate is 1.05 g/t and the in-pit estimates at this grade are shown in Table 6 for comparison. The H&SC estimate at a 1.05 g/t cut-off predicts about 38% more tonnes, 20% lower grade for about 10% more ounces. If the H&SC model was reported at a higher cut-off grade the estimated grade would be higher and the estimated tonnage and contained metal would be lower. The current estimate is considered to take appropriate account of the bulk sampling study.

	Tonnes (Kt)	Au (g/t)	Au (Koz)
1989-1990 (mill reconciled)	49.0	2.4	3.8
1994 (stockpiled)	9.8	1.9	0.6
Total	58.7	2.3	4.4
H&SC In Pit (1.05 g/t cut-off)	81.3	1.9	4.8

 Table 6: Comparison of mined material with estimated

7.9 Comparison to previous estimates

The Glencoe deposit was estimated by ResEval in April 2006 using Ordinary Kriging on domains created using a gold grade threshold of 0.5 g/t. This estimate was conducted before the Australasia Gold drilling. Figure 11 shows the grade-tonnage curves for the 2006 ResEval and 2021 H&SC resource estimates. The tonnages are displayed as solid lines and the grades are displayed as dashed lines. The ResEval estimate predicts significantly less tonnes but at a higher grade then the recoverable MIK estimate. H&SC considers that it is likely that the 2006 estimate was conditionally biased due to the use of relatively high-grade domain boundaries.

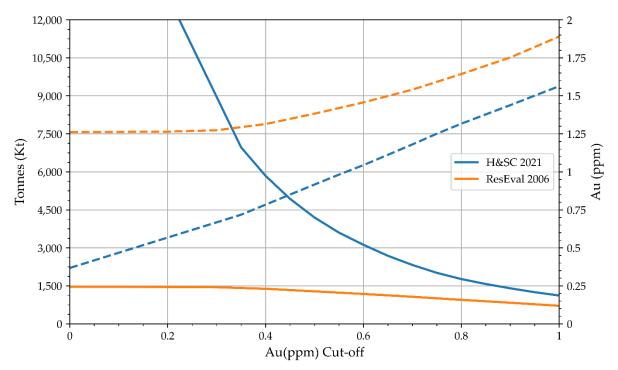


Figure 11: Grade-tonnage curves comparing H&SC estimate and previous ResEval 2006 estimate



JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 Samples used to inform the Mineral Resource Estimate (MRE) were obtained through reverse circulation (RC) and diamond drilling methods collected by campaigns from 1985 to 1987 by Magnum Gold NL/Magnum Resources Ltd ("Resource dataset"), and 2007 to 2008 by Australasia Gold Ltd ("Australasia Gold dataset"). Resource dataset 1985-1987: RC percussion holes were sampled at 1 m intervals, and cuttings riffle split to 2 - 4 kg sample for fire assay. Diamond drilling was carried out using HQ core size and triple tube core barrels to maximize recovery. Sample intervals were of varying length, 10cm to over 3 m, based on logged lithological boundaries, with split half core samples submitted for fire assay by AAL Pine Creek. 50g charges were used in Fire Assays. 'Australasia Gold' dataset 2007-2008: RC holes, and RC precollars were sampled at 1m intervals. Diamond drilling was carried out using HQ/HQ3 core sizes. RC/precollar and core samples were dispatched to ALS Chemex, Adelaide for preparation and then to their Perth facility for analysis. Samples were dried, pulverized (Method PREP-21) and analysed for multiple element (ME-ICP43), and gold either by Aqua Regia extraction (Au-OG43, 25g aliquot?), or Fire Assay extraction (Au-AA25, 30g charge).
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 Total of 322 RC holes and 67 Diamond Drill core holes have been drilled. Magnum Resources Ltd/Magnum Gold NL 1985-1987 – RC (310) and Diamond (59) Australasia Gold Ltd 2007-2008 – RC (12) and Diamond (8)

Criteria	JORC Code explanation	Commentary
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	 Resource dataset 1985-1987: Where poor sample recovery was encountered it was noted in geological logs (also sample quality was also noted in various terms such as 'Wet sample' and 'Contaminated'). Initial RC holes were largely confined to the interval above the water table (about 30 m) due to the difficulty in obtaining reliable sample below this interval. Improvement in technology later permitted reliable sampling to down-hole lengths in excess of 100 m. Diamond core recoveries were generally 100% at depths below the oxidation zone. Highest core losses were generally recorded in areas of mineralisation which are characterized by fracturing. Where necessary, the use of adjacent RC and diamond holes was employed to minimize this problem. The log data containing the sample recovery information has been examined by PNX and 'poor recovery' samples were found to form an insignificant (<2%) part of the dataset. Poor Recovery samples were found to generally overstate grades. No other relationship between grade and recovery, nor bias due to preferential material loss/gain has yet been identified. Australasia Gold dataset 2007-2008: Sample recovery does not appear to be included in the compiled geology logs. This will need to be further checked. It is unknown whether any other measures were taken to maximise sample recovery and ensure representative nature of the samples.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 Drill logs capturing lithological data are available for all drilling and are at a suitable level of detail to support Mineral Resource Estimation, mining studies and metallurgical studies. Resource 1985-1987: drilling logs are available in formats including PDFs, ASCII text files, and an Access database (<i>'magnum.mdb'</i>). Core photographs are not available/unable to be located. Australasia Gold 2007-2008: drilling logs are available as PDFs (scanned handwritten logs) and an Excel database. Core photographs exist.

Criteria	JORC Code explanation	Commentary
		All drilled lengths have been geologically logged.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Resource 1985-1987 dataset: All gold assays utilized fire assay techniques and in addition to routine laboratory repeats, a range of check assays were determined. RC drill holes and the open-hole precollar intervals of diamond holes were logged and samples taken at 1m downhole intervals by riffle-splitting the entire sample. Diamond core was sampled on the basis of logging after cutting the core. One half of the core was submitted for assay, the other half retained in core boxes at site. Australasia Gold dataset 2007-2008: (details stated already in <i>'Sampling Techniques'</i>, otherwise unknown). Sample size for the grain size of the material being sampled is appropriate.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 Resource dataset 1986-1987: Repeat assays were routinely performed. QAQC samples were not systematically submitted through this drilling program. Australasia Gold dataset 2007-2008: Lab duplicates were made on every 20th sample. There was good correlation in lab duplicate grades, negligible contamination in blanks, and standards were mostly within upper and lower target limits. Results of the internal laboratory (non-independent) standards and blanks from the Australasia Gold assaying were assessed by PNX. Standards were mostly within target limits and the blanks displayed only negligible contamination. Field Duplicates do not appear to have been obtained for any drilling, therefore grade variability at this level is unknown. The assaying techniques are considered to be appropriate for the basis of the Mineral Resource estimate. Lack of sufficient QAQC information is one of the reasons that the reported resource is classified entirely as Inferred. Gold analysis by Fire Assay is considered to be a total analysis. Gold analysis by Aqua Regia is

Criteria	JORC Code explanation	Commentary
		considered to be a partial. Comparison of Fire Assay and Aqua Regia assaying does not appear to have been carried out.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 No verification of significant intersections by either independent or alternative company personnel is known. At least 5 holes could be classified as twinned holes. No known documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. No adjustments to assay data were made except that the results from two drill holes were omitted from the dataset used to estimate the resource. Data from GCRC285 was omitted as the collar location was exactly the same as GCRC284, resulting in co-located samples. Both these holes are 20 m long vertical RC holes that were drilled as part of a line of holes spaced 2.5 m apart. Data from GLD008 was excluded at the request of PNX. GLD008 is a 330 m long diamond hole that was drilled below the mineralisation in Zone 4. Mineralisation was intercepted at a vertical depth of around 170 m below surface and it was uncertain how this mineralisation relates to the overlying mineralisation. The effect of this exclusion on the MRE is minimal due to the fact that the reported MRE is limited to a maximum depth of 120 m below surface.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Hole collar data was originally located by tape and compass. These locations were later verified by Crocodile Gold as being accurately measured. A large majority of holes ('GCRC' series RC) do not have downhole surveys – planned dips and azimuths have been assumed. Downhole surveys were conducted (devices not yet confirmed) for most of the 'Resource' 1985-1987 Diamond holes, and all of the 'Australasia Gold' 2007-2008 Diamond and RC holes. All data locations employ the Glencoe Local Grid system, in which Grid North is approximately 34 degrees East of True North. It was

Criteria	JORC Code explanation	Commentary
		originally surveyed by Geo-Spectrum in 1987 and re-established by Ausurv Pty Ltd for Australasia Gold in 2007. Transformation parameters to convert between GDA94 and Local Grid datum are:
		GDA94 to Local (origin point 1001) Rotation: 34 28' 37" Scale: 0.999494259 Shift East: -768425.534 Shift North: -8510174.325
		Local to GDA94 (origin point 1001) Rotation: -34 28' 37" Scale: 1.000505997 Shift East: 768425.534 Shift North: 8510174.325
		 The topographic surface ('GL_topo') was created by PNX by downloading the topographic map sheets from NT Atlas (ntlis.nt.gov.au) at 1:2500 scale and then digitizing the elevation levels based on the levels shown on the maps. Accuracy is stated on the original topographic map sheets as being via digital photogrammetric methods without field verification, with 90% of elevations correct to within ½ the contour interval (contour interval =1m). Detailed hydrographic surveys of the mined pits (they are filled with water, at present) have not yet been performed – the depths of the pits in this topographic surface have been based on depths of the blast holes.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	

Criteria	JORC Code explanation	Commentary
		 line spacings were varied according to specific circumstances. The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures and classifications applied. Downhole samples were composited to 2m for use in this MRE and block model.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 Several holes are considered to be oriented along dip of mineralisation. Not yet assessed.
Sample security	The measures taken to ensure sample security.	• Sample security measures for historic drill programs are not known.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	 No audits or reviews of sampling techniques and data have been carried out.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The Glencoe Project is situated within a single, granted Mineral Lease ML29679 within a single, granted Exploration License EL25748 (90% PNX Metals/ 10% Kirkland Lake Gold Australia Pty Ltd). Under the Sale and Purchase Agreement (SPA) (executed 27 April 2021) with private company, Ausgold Trading Pty Ltd, PNX has acquired Glencoe for a total consideration of \$1.875 million; of which \$1.175 million has been paid to date with the balance due by 31 December 2021 (refer to Key Terms in ASX announcement 10 December 2020 for further information). The Company has also received unconditional approval from the Foreign Investment Review Board for the acquisition.

Criteria	JORC Code explanation	Commentary
		The Glencoe Project area is situated within the pastoral lease of Ban Ban Station, parcel number 695. PNX has existing arrangements with the pastoral lease holders, which governs land access and other obligations for each party and will include Glencoe in this arrangement. An Indigenous Land Use Agreement (ILUA) surrounds and follows the main access road, Ban Ban Springs Rd, situated in the western end of the resource and partially covering the resource. It is unclear at this stage what actions if any are needed.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Exploration and related activities at the Glencoe Project can be broadly categorized into the phases listed below. This MRE uses drilling data from the 1985-1987 and 2007-2008 drilling programs only.
		Magnum Resources Ltd/Magnum Gold NL 1985-1987 – Discovery, Drilling Programs (Auger, RAB, RC, DD) 1988 – Metallurgical Testwork 1989-1990 – 1 st Trial Mining 1995 – 2 nd Trial Mining (aborted early – material stockpiled)
		Australasia Gold 2006 – Optimisation and Scoping Study 2007 – Survey of the Glencoe Local Grid, IP/Resistivity Survey 2007-2008 – Drilling Programs (RC, DD) 2011 – Heliborne VTEM Survey
		Newmarket Gold NT 2012 – Processing Stockpiled Material 2016 – Environmental and Metallurgical Testwork
Geology	Deposit type, geological setting and style of mineralisation.	 Glencoe mineralisation is hosted by greywackes, sandstones, siltstones and mudstones of the Palaeoproterozoic Mount Bonnie Formation, and contained within complex quartz veining and shearing

Criteria	JORC Code explanation	Commentary
		spatially associated with the axial regions of shallow plunging anticlines.
		Notable features:
		1) The majority of the quartz vein mineralization occurs within sub vertical to steeply dipping fracture and shear zones, with previous workers also noting a possible association with more ductile carbonaceous mudstone in these zones. Veins range in width from millimetre scale up to several metres.
		2) A second style of quartz veining is interpreted as having a conformable or 'saddle reef' geometry, and occurs as stratabound bodies extending outwards from the discordant fracture-filled zones. This style is also described as favouring carbonaceous mudstone horizons, as well carrying higher gold values.
		3) Late-stage chlorite alteration, shearing and brecciation overprinting earlier veining is also a feature, including country rock breccias with a chlorite matrix. It is noted by previous work that this alteration also appears to enhance gold values in both veins and breccias
		Important features of the chemical environment of gold occurrence include:
		1) A strong association of gold with sulphides, dominantly pyrite and arsenopyrite.
		 The occurrence of other metals in only trace amounts, most notably Cu and Bi.
		3) There is a close association between chlorite alteration and sulphide/gold/quartz vein development.
		4) Oxidation of sulphides has occurred in the weathered zone, and been replaced by iron oxide phases such as goethite and limonite occurring as fracture coatings and box works. This is inferred to have

Criteria	JORC Code explanation	Commentary
		resulted in some gold re-distribution during an overprinting supergene event.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	Exploration results are not being reported.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	 Exploration results are not being reported.
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 Relevant maps and diagrams are included in the body of the report.
Balanced reporting	 Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of 	 Exploration results are not being reported.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	 Exploration Results. Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	 Grade control/Blast Hole data from the four trial pits - not used due to uncertainty regarding hole position accuracy. Costeans, Auger holes, and shallow RAB holes, conducted by Magnum Resources from 1985-1986. Metallurgical test results: a) Amdel Ltd testwork for Australasia Gold, 2010, includes comminution, flotation, gravity separation and leaching tests, and b) ALS Metallurgy testwork for Ark Mining, 2012, includes gravity separation/cyanidation time leach testwork. Geological observations in the form of downhole lithology logs, various cross sections, a petrography report, and surface geochemical sampling. Information on geotechnical and rock characteristics, geophysical surveys, or potential deleterious or contaminating substances. The trial mining/bulk sample size and method of treatment are either unavailable or not yet thoroughly searched.
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Further work will focus on testing extensions along-strike and down- dip, exploring for entirely new anomalies in vicinity of the known orebodies, and to confirm grade and geological continuity implied by the current block model. Diagrams have been included in the body of this report.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 It is not known what measures were taken to ensure that the data has not been corrupted between its initial collection and its use for Mineral Resource estimation purposes. The drill hole database was provided to H&SC in the form of four comma delimited files. H&SC did not modify these tables and any adjustments, such as compositing, were carried out

Criteria	JORC Code explanation	Commentary
		 programmatically so a transcript of any changes was recorded and checked. Basic drill hole database validation completed by H&SC include: Intervals sampled for gold were assessed and checked for duplicate entries, sample overlaps, intervals beyond end of hole depths and unusual assay values Downhole geological logging was also checked for interval overlaps, intervals beyond end of hole depths and inconsistent data. The downhole survey data provided were checked for unrealistic deviations. Assessment of the data indicates that it is suitable to form the basis of the Inferred MRE presented here.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 Marco Scardigno who acts as Resource Geologist for PNX Metals and takes responsibility for the data underpinning the Mineral Resource Estimate has not visited the Glencoe deposit due to wet conditions in the area during early 2021. No site visit has been conducted by H&SC due to time and budget constraints and restrictions due to the Covid-19 pandemic.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 A geological model of the Glencoe deposit has not been produced. The gold mineralisation at Glencoe is generally found associated with structurally controlled quartz veining within sub vertical to steeply dipping fracture and shear zones. Veins range in width from millimetre scale up to several metres. H&SC produced a total of 7 steeply dipping wireframe solids that represent volumes of gold mineralisation elevated above background grades. This resulted in a nominal 0.08 g/t grade threshold boundary. These zones form coherent, sub-parallel, nominally tabular bodies and are well supported by drilling. Drill hole data indicates that near surface mineralisation (to a depth of around eight metres) appears to spread out, covering a larger area than the steeply dipping zones. A flat-lying shallow wireframe

Criteria	JORC Code explanation	Commentary
		 surface was created In order to define these areas. Samples outside the mineralized domains were not included in the estimate. PNX created wireframe surfaces representing the (Base of Complete Oxidation (BOCO) and the Top of Fresh Rock (TOFR). These surfaces are based on drill hole logging although they do not always match the weathering data because a certain degree of smoothing was applied in order to create a continuous surface, in particular where overlapping or close-spaced holes had very different values (possibly due to different geologist interpretations). The recoverable MIK gold estimates were based on indicators from 14 bins at varying thresholds. The thresholds and bin statistics were defined individually for each domain. Variogram models were produced for each of the domains that contained sufficient data and the search ellipse was orientated to parallel the domain mineralisation. The continuity of the shallow mineralisation, above the flat-lying wireframe surface was interpreted to be horizontal, and so the search ellipses were rotated to reflect this. Small local variations in the interpretation of the continuity of individual domains are possible but are unlikely to significantly impact the global MRE as the interpretation of the domains is well supported by drill hole data and the domain boundary was set at a relatively low grade. No faults were modelled.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 Diagrams of the reported resource are shown in the report for clarification. The Mineral Resources at Glencoe at a cut-off of 0.7 g/t gold exist in about seven discrete volumes with a strike length of around 1.5 km grid east-west and a plan width of 320 m. The upper limit of the mineralisation occurs at surface and the reported resources are limited to a maximum depth of 120 m below surface. The resources are composed of several steeply dipping tabular bodies between 10 and 70 m thick.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	 The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions about correlation between variables. Description of hasis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	 The gold concentration was estimated by recoverable Multiple Indicator Kriging (MIK) using the GS3 geostatistical software. H&SC considers MIK to be an appropriate estimation technique for the type of gold mineralisation as the grade populations are skewed and sometimes mineralised and unmineralised material are intermingled. Only gold was estimated so no assumptions between variables were made. It is assumed that there will be no by-products. Deleterious elements such as sulphur or arsenic have not been estimated. The presence of arsenopyrite recorded in drill hole logs indicate that arsenic mineralisation is present. Estimates of gold grades were limited to the volumes represented by the seven steeply dipping mineralisation wireframes and the volume above the shallow horizontal wireframe representing surficial mineralisation. Variography was carried out on composited data from within these domains where sufficient samples were present. The search ellipses and variogram models were aligned parallel to the interpreted mineralisation orientation for each zone. Surfaces representing the base of completely weathered, and top of fresh rock were created using data from drill hole logs. The portions of the block model in the completely weathered portion of the deposit were assigned a density of 2.40 t/m³. The partially weathered zone was assigned a density of 2.50 t/m³ and the fresh zone was assigned a density of 2.70 t/m³. A total of 12,672 one metre composites were used to estimate the gold mineralisation. The highest composite gold grade is 54.5 g/t and the highest CV for the mineralized zones of the gold composites is 4.7. No top-cutting was performed as it was considered unnecessary due to the use of Recoverable MIK for estimation. Each of the fourteen grade bins was assigned the mean of the bin for each mineralised domain. Drill holes at Glencee are positioned on a grid with a nominal spacing of 20x10 m. Composite length is 1 m. Block dimensio

Criteria JORC Code explanation	Commentary
Criteria JORC Code explanation	 (preferable for MIK estimation). The vertical dimension was chosen as a compromise between downhole data spacing, the orientation of the steeply dipping mineralisation with respect to the drilling and the planned bench height. Discretisation was set to 5x5x5 (E, N, RL respectively). For the recoverable MIK gold estimate four search passes were employed with progressively larger radii or decreasing search criteria. The radii of the first pass was 25x25x10 m (along strike, down dip and across dip respectively) and increased to 50x50x10 for the second pass. The search radii for passes three and four were set to 75x75x15. The maximum number of data required for the first three passes was 64. The minimum number of data required for the first three passes was 28 with data required from at least four of the eight octants. The minimum number of data required from at least two octants. The maximum distance of extrapolation of reported resource estimates from data points is limited to 50 m and the maximum depth of reported estimates is set to 120 m below surface. These spatial limits were applied following estimated areas. MIK estimation works best using blocks that are a similar size to sample spacing. The resources in smaller Selective Mining Units (SMUs) can be reported by applying a block support adjustment based on the dispersion variance that occurs when changing from sample size support to the size of a mining block. In order to apply a block support adjustment based on the dispersion variance that occurs when changing from sample size support to the size of a mining block. In order to apply a block support adjustment, assumptions have to be made regarding the SMU size allow for more selective wining. At Glence an SMU size of 5x5x2.5 m (E, N, RL respectively) and final grade control drilling is assumed to be conducted on a grid spacing 5x3.5x4 m (E, N, RL respectively) and final grade control drilling is likely to decrease the achievable gold mining

Criteria	JORC Code explanation	Commentary
		 grades. The estimation procedure was reviewed as part of an internal H&SC peer review. Gold was also estimated using Ordinary Kriging and uncut gold composites to provide a check on the recoverable MIK estimate and it is considered that the final model takes account of the check estimate. The Glencoe deposit was estimated by ResEval in April 2006 using Ordinary Kriging on domains created using a gold grade threshold of 0.5 g/t. This estimate predicts significantly less tonnes but at a higher grade than the recoverable MIK estimate. H&SC considers that it is likely that the 2006 estimate is conditionally biased due to the use of relatively high-grade domain boundaries. The final H&SC block model was reviewed visually by H&SC and PNX Metals and it was concluded that the block model fairly represents the grades observed in the drill holes. H&SC also validated the block model statistically using histograms, boxplots, swathe plots and summary statistics. Limited trial mining occurred at Glencoe in 1989-1990 and again in 1994. Based on the limited data available regarding the results of this trial mining the current estimate appears to reconcile reasonably well.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	 Tonnages are estimated on a dry weight basis. The moisture constant was not determined.
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	• The gold cut-off grade of 0.7 g/t was selected by PNX Metals as it is considered that the Glencoe deposit can be mined economically at this grade.
Mining factors or assumptions	 Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be 	 All of the resources reported here have been estimated on the assumption that the deposits will be mined by an open-pit method. At Glencoe an SMU size of 5x5x2.5 m (E, N, RL respectively) and final grade control drilling is assumed to be conducted on a pattern of 3.5x3.5x4 m (E, N, RL respectively). Less selectivity due to a larger SMU or more diffuse grade control drilling is likely to decrease the

Criteria	JORC Code explanation	Commentary
	reported with an explanation of the basis of the mining assumptions made.	achievable gold mining grades.Internal dilution, within the SMU unit is accounted for.
Metallurgical factors or assumptions	 The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. 	 sample based on the head assay results. Gravity separation and subsequent cyanidation time leach testwork
Environmen- tal factors or assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	 It is assumed that no unusual measures need be employed for mining of the Glencoe deposit. The area is comprised of subdued topography within floodplains. Light vegetation covers the area and is used mainly for pastoral activities. The area is prone to flooding, and tends to have limited
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and	 Historic density test work was carried out on 388 diamond core samples although the method of measurement is not known. More recently PNX conducted test work on 63 samples using an

Criteria	JORC Code explanation	Commentary
	 representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 Archimedes technique. The vast majority of samples were from fresh rock. Drill core pieces between 10 and 30 cm were dried and weighed. The samples were then soaked in water in order to saturate the sample and weighed again. The samples were then weighed in water. After assessing the density measurement results PNX Metals elected to use assumed values for the different oxidation zones. The blocks in the completely weathered portion of the deposit was assigned a density of 2.40 t/m3. The partially weathered zone was assigned a density of 2.50 t/m3 and the fresh zone was assigned a density density assessment is recommended in order to raise the classification of the Mineral Resource.
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 Despite the close spaced drilling and proven grade continuity, the entire MRE is classified as Inferred due to issues regarding the underlying data noted below. Lack of ability to demonstrate the accuracy and reliability of the drilling results due to their historic nature Density test work is questionable and density values are assumed Very little QAQC test work has been completed on the assay samples from the Glencoe deposit Lack of data regarding RC sample recoveries, and the data that does exist suggests that there may be problems with samples of low recovery and wet RC samples Historic reports point to possible serious issues including downhole sample contamination
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	 No external audits or reviews of the MRE have been completed. The estimation procedure was reviewed as part of an internal H&SC peer review.
Discussion of relative	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For	• The relative accuracy and confidence level in the MRE are considered to be in line with the generally accepted accuracy and confidence of

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	 example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	 Inferred Mineral Resources. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar deposits. Alternative interpretations of the mineralisation at Glencoe are possible. It is unlikely that alternative orientations will considerably impact the global resource estimate. Local estimates, on a block scale, may be impacted more significantly. The SMU is assumed to be 5x5x2.5 m and grade control drilling is assumed to be 3.5x3.5x4 m. Less selectivity due to a larger SMU or more diffuse grade control drilling is likely to decrease the achievable global gold mining grades. The cut-off grade selected by PNX Metals is reasonably high compared to the average grade of the mineralisation, which means that a high level of selectivity will be required at the time of mining. This lowers the confidence in the estimate and raises the importance of employing a high quality grade-control process. The estimates are considered to be global and, as the entire Mineral Resource is classified as Inferred, none of it is considered to be relevant to technical and economic evaluation.